Current Trends in Nursing Workload for Inpatient and ~~Ambulatory~~

"Understanding the Power of Workload"

Gregory Mitchell
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Briefing Outline

PURPOSE: To provide information on current trends in Nursing Workload

- Nursing Workload Systems:
  - Inpatient Workload
  - Ambulatory Workload
- Data Quality
- Highlight key milestones for the future Workload Management System for Nurses (WMSN)
- Questions
- References

Why capture workload and manhours?

"You're in a hospital, Nurse Hill. If you collapse from exhaustion, the emergency room is just down the hall."

Workload Systems

System	Purpose/Type of Data	Advantages
CHCS	inpatient, outpatient and ancillary workload data	justify staffing, to trend patient care demands, in make/buy decisions
AHLTA	outpatient visits and ambulatory procedure visits	
ADM (Ambulatory Data Module)	ambulatory encounter data collection system that captures episodes of care and produces the SADR (Standard Ambulatory Data Record)	Provides a true picture of clinic practice patterns and patient requirements to evaluate the cost, quality and availability of care. Used in determining staffing

Workload Systems

System	Purpose/Type of Data	Advantages
MEPRS	Tri-service resource management system designed to report manpower and workload in MTFs worldwide. Identifies work centers with a code	Expenses are distributed to department based on the amount of workload performed by one work center for another. Workload factors include admissions, occupied bed days, outpatient visits, weighted procedures and minutes of service
WAM	provides MTF expense, obligation, workload and manpower information using automated interfaces	Once the WAM file are complete, it is transmitted to EASIV and other DoD offices. EAS IV data is used by MEDCOM, OTSG and DoD HA .

Workload Systems

System	Purpose/Type of Data	Advantages
DMHRSi	Tri-service system to manage human resource information medical readiness, personnel, training, scheduling	Direct interface with CHCS, provides patient accountability data to categorize and track. Provides available and non available man- hours and personnel expenses by MEPRS account. It is critical to update DMHRSi weekly with accurate clinician/non clinician hours available and non available for work
WMSN (Workload Management System for Nursing)	Inpatient Nursing Workload Capture -PACS/LADS/S3	Currently being upgraded as web application and critical indicators time values updated through ongoing time and motion study

Personal Data - Privacy Act of 1974 (PL 93-579)

* * * MONTHLY MEPRS ACTIVITY REPORT * * *

From: 01 February 2010 To: 28 February 2010

CODE/DMIS MEPRS DESCRIPTION Wards:	APGYN	GENSUR	ICUA	ICUB	ISDA	KEIKI	LD	MBU	MEDONC	MEDTEL	NICU	ONV
AAAA/0000 INTERNAL MEDICINE	7	10	28	124					514	340	22	
AABA/0000 CARDIOLOGY	5	8							65			
AAEA/0000 ENDOCRINOLOGY	11											
ABAA/0000 GENERAL SURGERY	6	203	27	22	1						18	
ABBA/0000 CARDIOVASCULAR/THORAC		21	21							38		1
ABDA/0000 NEUROSURGERY	3	2	3							44		
ABEA/0000 OPHTHALMOLOGY		1										
ABFA/0000 ORAL SURGERY		10		1								1
ABGA/0000 OTORHINOLARYNGOLOGY	65	4	1						3	1		
ABIA/0000 PLASTIC SURGERY				1						3		
ABKA/0000 UROLOGY	2	57		1						2		
ABNA/0000 PERIPHERAL VASCULAR S	32	1	4						1	118		
ABQA/0000 VIR INTERVENTIONAL VA	1	2	2	1					1			
ACAA/0000 GYNECOLOGY	67	1							5	3		1
ACBA/0000 OBSTETRICS & GYNECOLO	109	2			180	275						
ADAA/0000 PEDIATRICS										64		
ADBA/0000 NURSERY	15						13	318			407	
AEAA/0000 ORTHOPEDICS		2		6						1		172
AGAA/0000 FAMILY MEDICINE INPAT	2	4						2	68	56	10	
AGHA/0000 FAMILY MEDICINE NEWBO	2											
TOTALS	211	400	92	187	8	13	180	595	588	512	472	387

Why is DMHRSi important for nursing?

- Capturing Nursing time accurately
- Displaying the amount of time not available for patient care
- Why is all of the time (including time unavailable for patient care) charged to my unit?
- How can Nursing do it accurately and why does it matter, who cares?

What is the workload data used for?

Automated Staffing Assessment Model (ASAM)

- Developed by MEDCOM to determine minimum essential MTF manpower requirements.
- Assists the MTF commander to make decisions regarding operational staffing and a tool to project staffing to meet mission changes
- Uses mathematical formulas to determine manpower requirements based on population or projected workload
- Identifies provider and support staff skill sets and the number of people required (does not dictate personnel type: civilian, military, contract)

ASAM

- Uses Army standard availability factor of 145 hours/month
- Assumes that the work will be done in house
- Results should be documented on your next TDA

How is Inpatient Nursing Workload Captured for ASAM?

ASAM: Inpatient Nursing Module

- ASAM uses nursing workload captured by WMSN as the foundation of the module
- Includes additional factors of:
  - readiness
  - continuing education
  - minutes of service for after hours recoveries
  - “orientees” and other site unique factors

Inpatient Nursing

- ASAM uses nursing workload captured by CHCS and WMSN to validate the number of nursing and support staff needed
- Separate workload capture systems are used in LADS and PACU areas
- Some positions are straight lined and not based on workload (Head Nurse and WM)

ASAM Inpatient Work Center Data Collection

X9	Y	"Y" =Yes "N" =No This is considered a Stand Alone Unit/Ward IF ="Y"
	B. ADDITIONAL NURSING CARE WORKLOAD (If Appropriate)	
X10	0	Annual Number of Recovery Patients After Hours
X11	0	Annual Minutes of Service for Observation Patients
X12	0	Daily Avg #of Telemetry Patients Monitored by Telemetry Techs
	C. STAFF RELATED - EDUCATION / TRAINING	
X13	0	**(Preceptorship Prg)** Annual Number of New 2nd LT's
X14	0	Annual Number of Staff Orientees
X15	0	Number of RN's / LPN's Assigned (CEU's)
X16	0	**(RN 5-7-9 Prg)** Annual Number of RN's In Training
	D. READINESS	
X17	3	Baseline TDA Authorized Military Officers
X18	4	Baseline TDA Authorized Military Enlisted
	E. ANNUAL AVAILABLE HOURS	
X19	1740	Hours
X20	0	#of Assigned LN's - AVAILABLE ANNUAL HOUR ADJUSTMENT
	F. OTHER ANNUAL HOURS	
X21	0	0
X22	0	0

ASAM Inpatient Work Center Calculations

G. TO MEET MINIMAL STAFFING REQUIREMENTS

X23	FALSE	ADD REOS TO MEET MINIMAL NUMBER OF REQUIREMENTS TO STAFF INPATIENT UNIT IS 12 FOR CONUS and 13 FOR OCONUS

MANPOWER EQUATION APPLICATION	FORECAST	FORECASTED	FORECASTED			
A. FORECASTED WMNS NUR CARE	RATIO	OBD	NCH	COMMENT	STAFF	
=(((X3*7*7.5)/60)*1.662)/X19	0.862	0	0.000		0.000	CAT I
=(((X4*22*7.5)/60)*1.662)/X19	0.862	1	3.940		0.002	CAT II
=(((X5*48*7.5)/60)*1.662)/X19	0.862	9	94.563		0.054	CAT III
=(((X6*80*7.5)/60)*1.662)/X19	0.862	310	5157.984		2.964	CAT IV
=(((X7*121*7.5)/60)*1.662)/X19	0.862	779	19590.309		11.259	CAT V
=(((X8*204*7.5)/60)*1.662)/X19	0.862	133	5626.501		3.234	CAT VI
		1233	30473.297	TOTAL	17.513	
=IF(X9="Y",3)				1	3.000	MANAGEMENT/ADMIN
B. =(X10*3)/X19					0.000	AFTER HOURS PATIENT RECOVERY
=(X11/60)/X19					0.000	PATIENT OBSERVATION
=IF(X12<4.5,0,IF(X12>=4.5,5))					0.000	TRAINED TELEMETRY TECHS
C. =(((X13*19.333)+(X14*4)+(X15*1.75)+(X16*19.333))*12)/X19					0.000	TRG PRGS, ORIENT, CONT EDU
D. =((X17*90)+(X18*90))/X19					0.362	READINESS
E. =(X20*1.5*4.348*12)/X19					0.000	LN ADJUST
F. =(X21+X22)/X19					0.000	OTHER ANNUAL HOURS
				TOTAL	0.362	

ASAM Inpatient Work Center Outcomes

TOTAL(S)	17.875
MANAGEMENT/ADMIN	3.000
GRAND TOTAL(S)	20.875
GRAND TOTAL(S) <12 or >12	20.875
NOTE (X23) TO MEET MINIMAL REQS	FALSE
TOTAL EARNED REQS	20.875
ROUNDED	21.0

RECOMMENDED BREAKOUT:

RN	PARA	LPN	NA / ADMIN	
59.0%	41%	75.0%	25%	TOTAL
12.4	8.6	6.5	2.2	21.0

RECOMMENDED STAFF PER SHIFT:

	DAYS	EVENINGS	NIGHTS	TOTAL
	33.3%	33.3%	33.3%	100%
RN	4.1	4.1	4.1	12.4
LPN/NA/ADM	2.9	2.9	2.9	8.6
				21.0

COMMENTS	
NOTE:	IAW THE WORKLOAD MANAGEMENT SYSTEM FOR NURSING. FM 8-501
NOTE:	FORECAST RATIO = (X3 POPULATION TO SUPPORT / X2 POPULATION SUPPORTED) : OBD FORECASTED = (Current OBD x F
NOTE:	HIGHLY RECOMMEND A COST ANALYSIS BE DONE ON THIS UNIT IF 6 or MORE REOS ARE GIVEN TO MEET MINIMAL REOS LI
1	CLIN HD NUR, PRAC NUR NCO, MED SPT (OA)
2	0

Ambulatory Nursing Workload

- In the clinics, nursing staffing and nursing work performed is dependent upon provider workload. (AHLTA, ADM)
- Nurses are considered support staff.
- Clinics may not be capturing all of their potential workload performed, particularly outside the clinic.

Ambulatory Procedure Visits

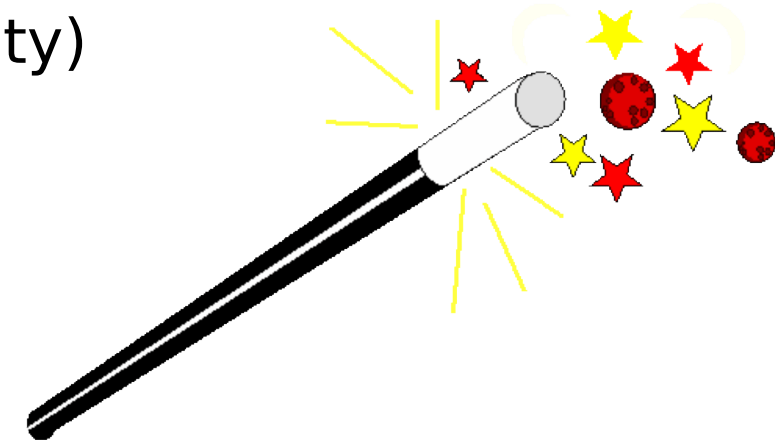
- Same Day Surgery, Short Stay Units and Ambulatory Procedure Units are staffed by nurses.
- APV Nursing credit is in minutes of service. Pre, intra and post APV.
- APV workload is a challenge. The CHCS and ADM workload is credited to the referring clinic MEPRS code (Cardiology, Pediatrics, Surgery,etc)

Minutes of Service

- At this time, m.o.s. is the only nursing workload capture mechanism recognized for the ancillary work centers.

Workload Data Quality

- Ensure all data entry is valid & reliable
- Leadership must expect quality data
- Data entry may be at lowest level but is everyone's responsibility
- Quality workload data is essential to decision making
- Data is used by DoD and Lead Agents to determine MTF complexity & resources
- IRR (Inter-Rater Reliability)



Our Future Nursing Workload Model……

WMSN Refresh Time Line

Oct 09 -Patient Assessment Prototype / Server Purchase

Nov 09 - Schedule Prototype

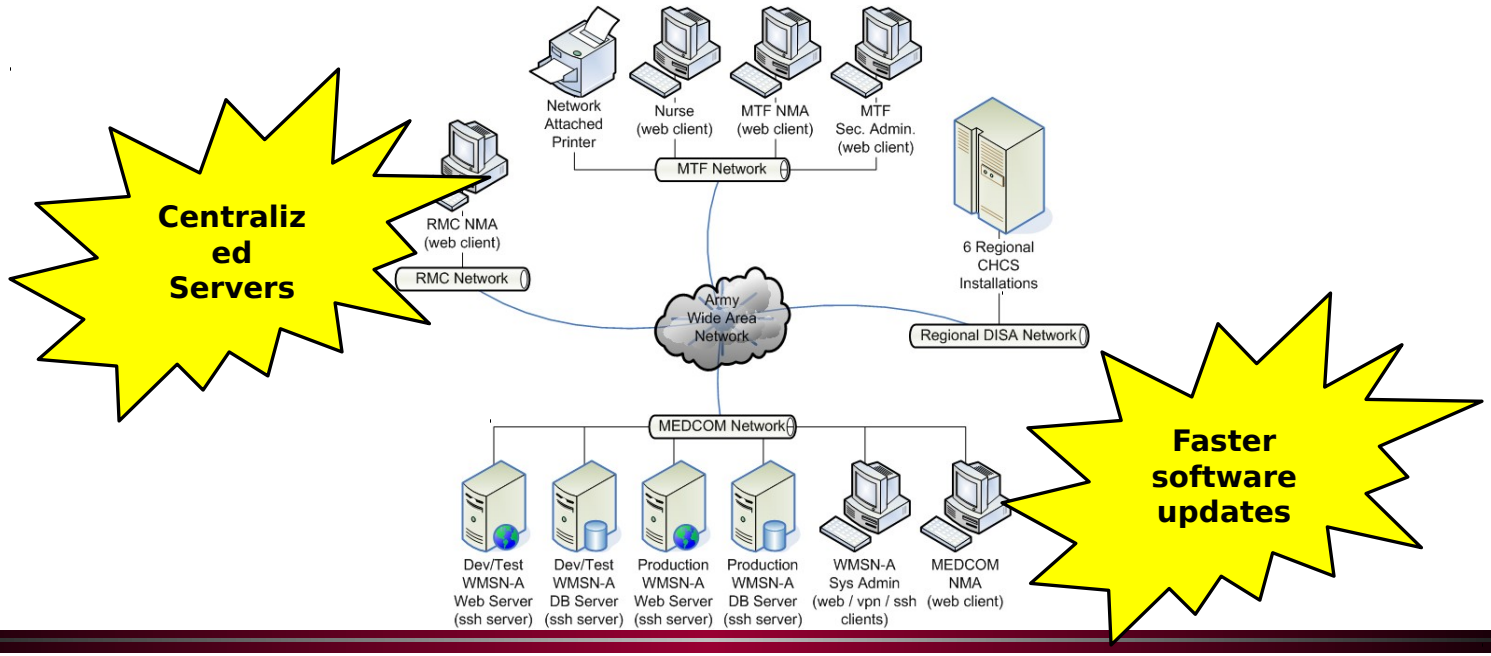
Mar FY10 - Patient Assessment and Schedule Final Release

Mar 10 - Patient Management Prototype

May FY10

Beta testing at Ft Hood/Ft Carson/Ft Knox

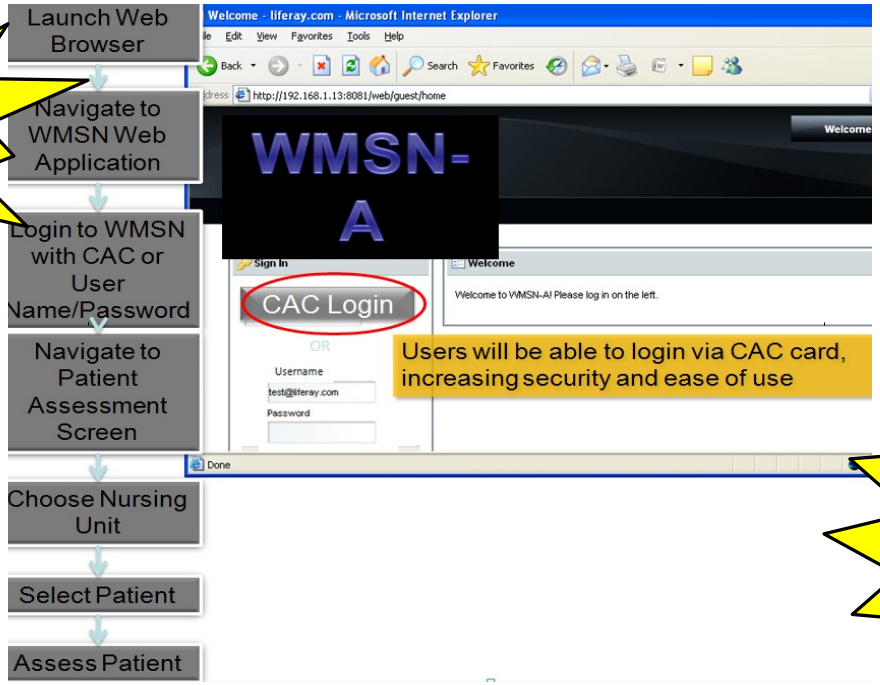
Oct FY11 - Patient Management Final Release


Centralized Servers
Network Attached Printer
Nurse (web client)
MTF NMA (web client)
MTF Sec. Admin. (web client)
MTF Network
RMC NMA (web client)
RMC Network
6 Regional CHCS Installations
Army Wide Area Network
Regional DISA Network
MEDCOM Network
Dev/Test WMSN-A Web Server (ssh server)
Dev/Test WMSN-A DB Server (ssh server)
Production WMSN-A Web Server (ssh server)
Production WMSN-A DB Server (ssh server)
WMSN-A Sys Admin (web / vpn / ssh clients)
MEDCOM NMA (web client)
Faster software updates

Current Modules

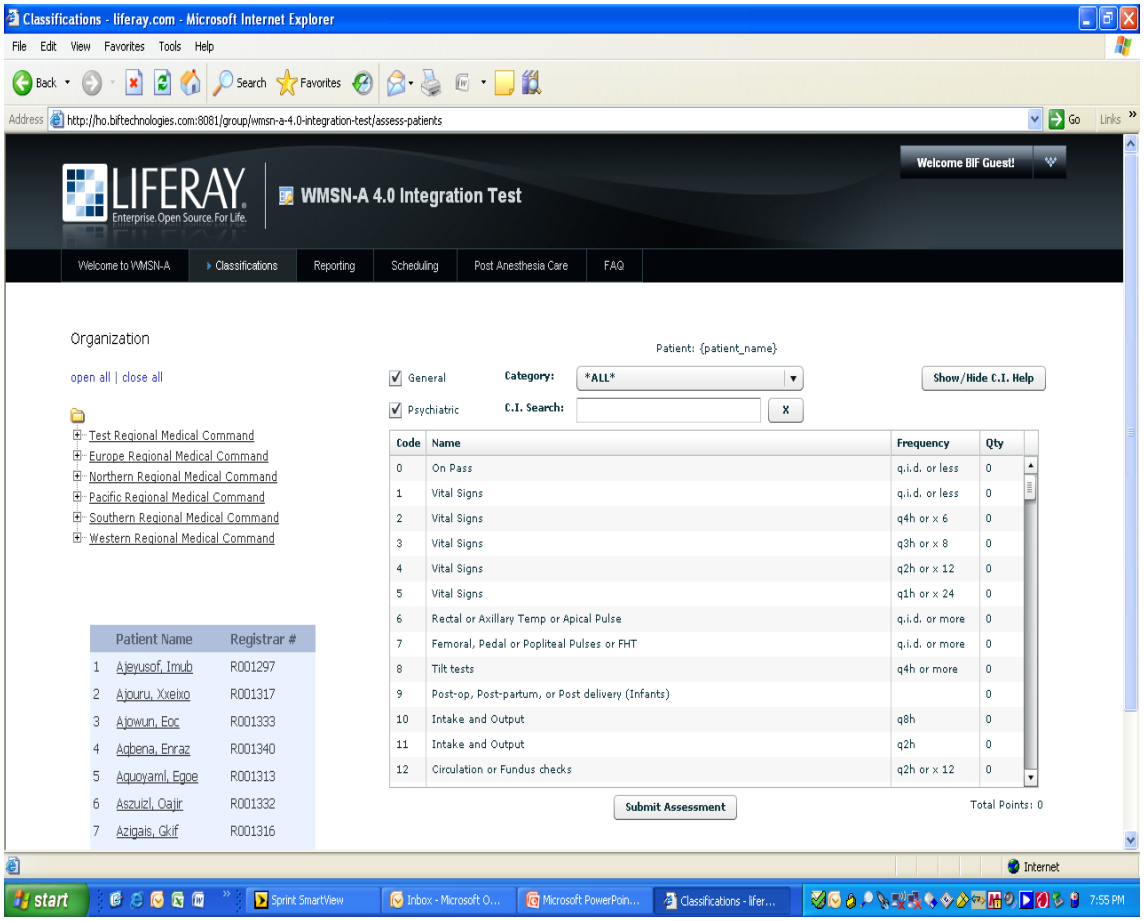
- Patient Assessment
- Schedule (including staff management)
- PACS and LADS
- Reports

Web Based Application



Scroll and Click Functions

Patient Classification



Benefits of new system

- Mouse friendly – no more “F Keys”
- Definitions of critical indicators easy to access
- Default classification will be Cat II

Improved report availability and visibility

- Daily/24 hour report – similar to existing 24 hour report
- Monthly reports viewable by HN, supervisors, Chief Nurse and MEDCOM (including ACOP)

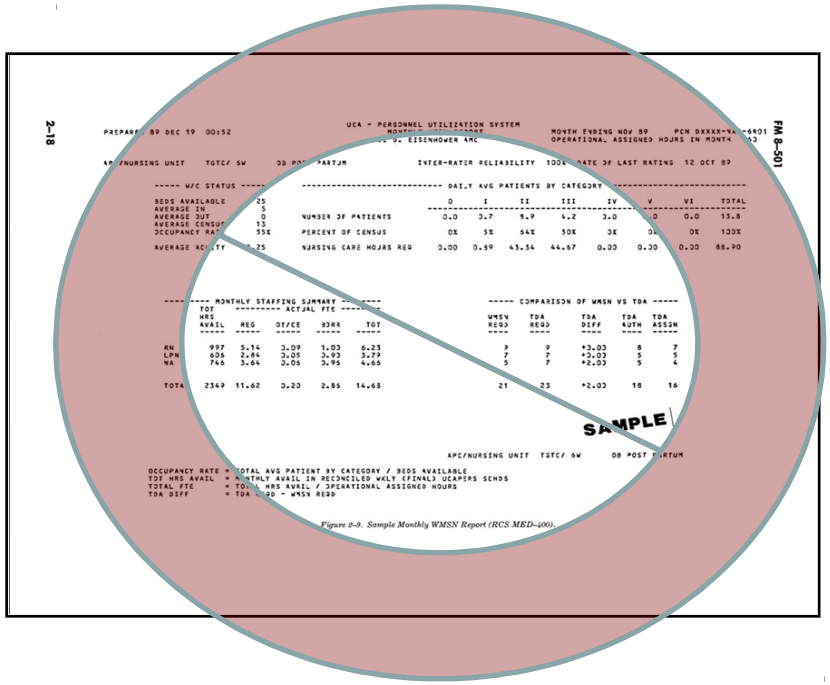
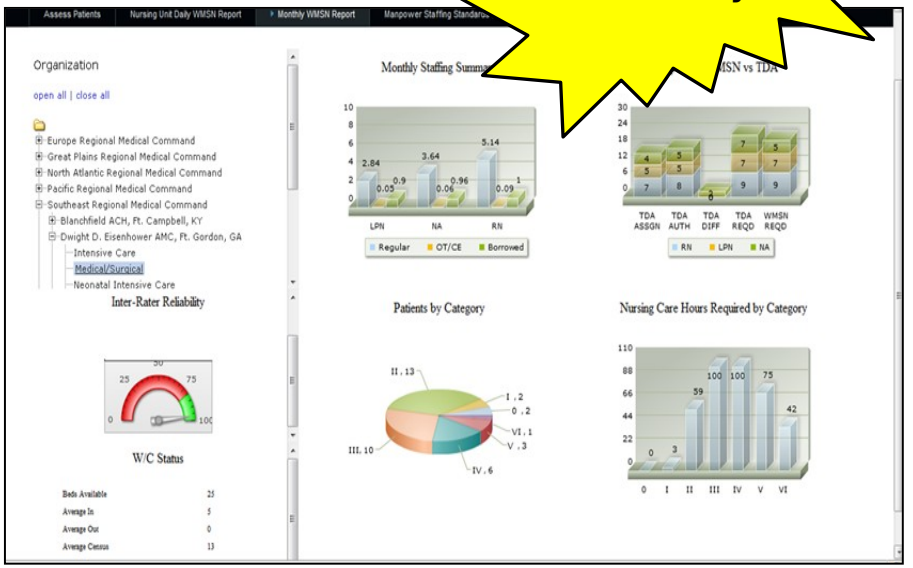


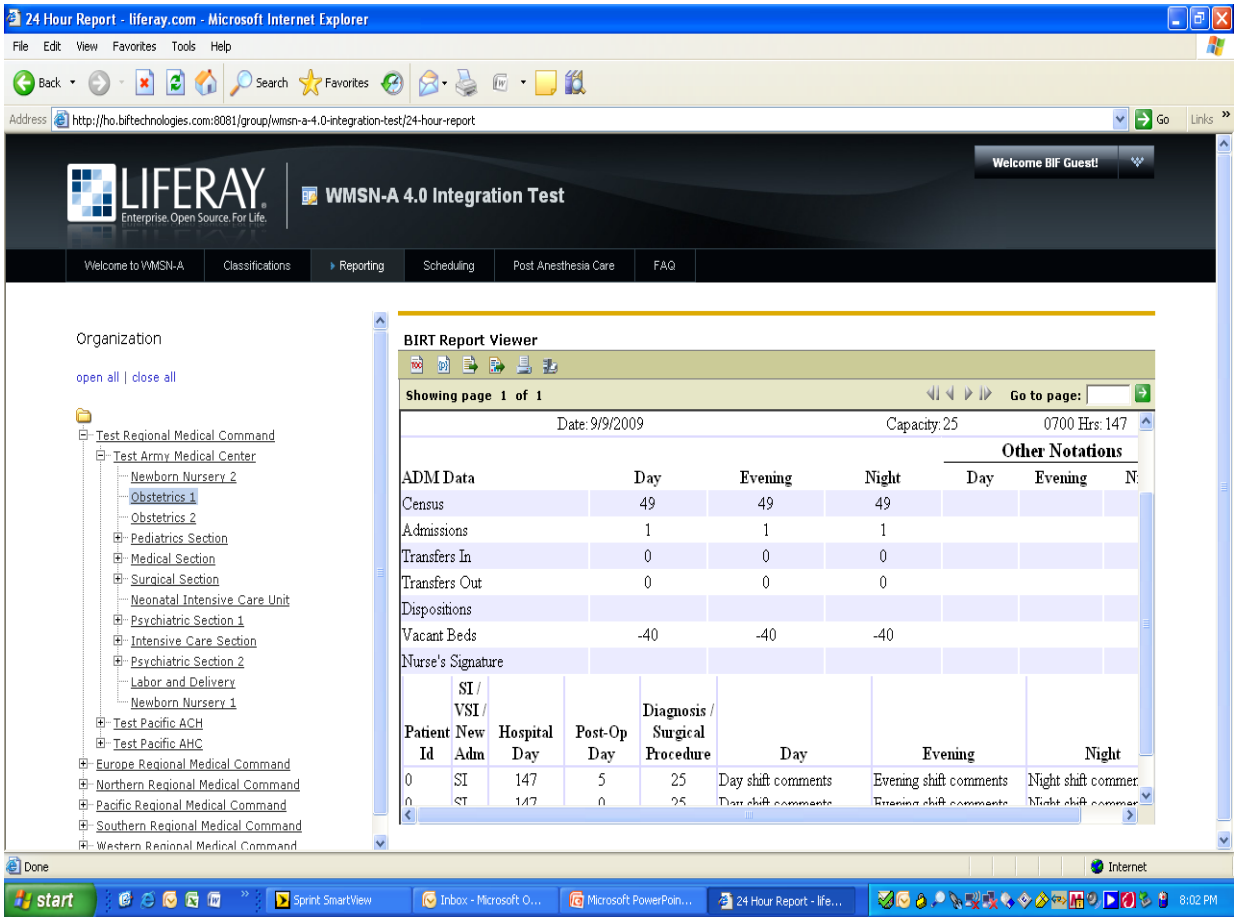
Figure 2-9. Sample Monthly WMSN Report (RCS MED-400)

Increased Usability



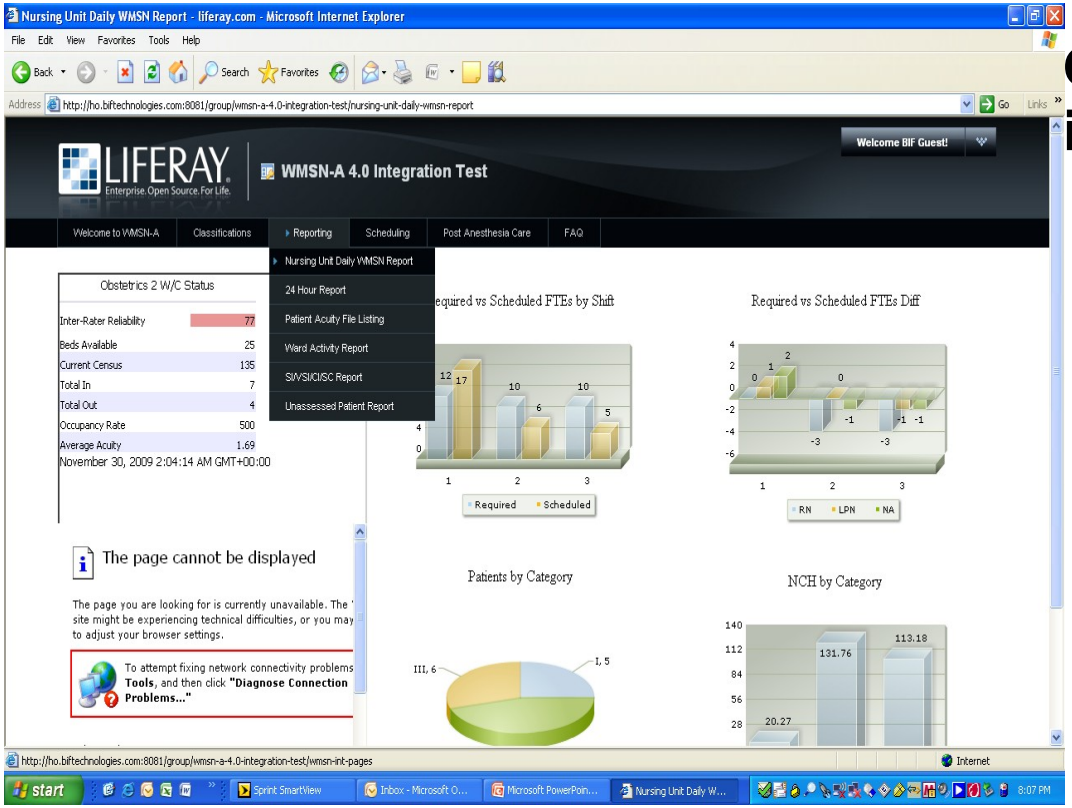
This is a recreation of *Figure 2-9 Sample Monthly WMSN Report* from FM 8-501 using Insight.

24 Hour Report



- Electronic 24 hour report which looks similar to paper version
- Able to see available staff real time
- Can be viewed from any computer in the hospital
- Can keep a record of the information in the data base for future

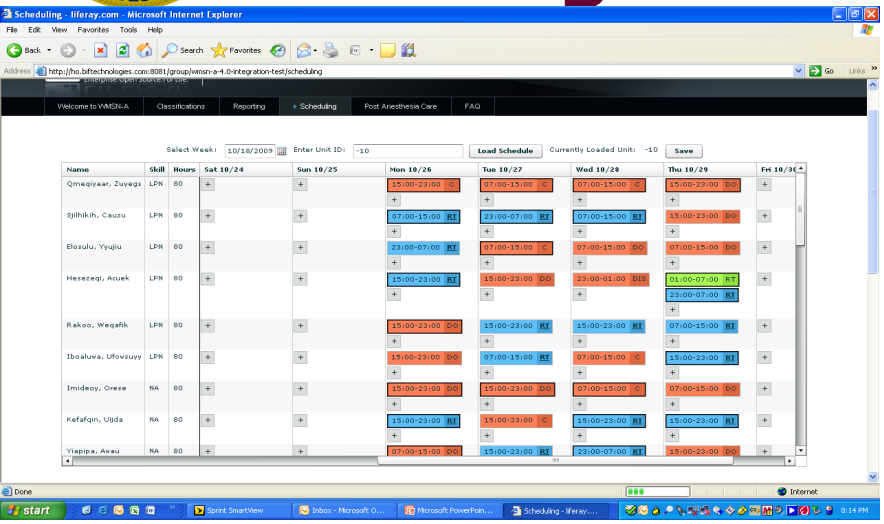
Reports

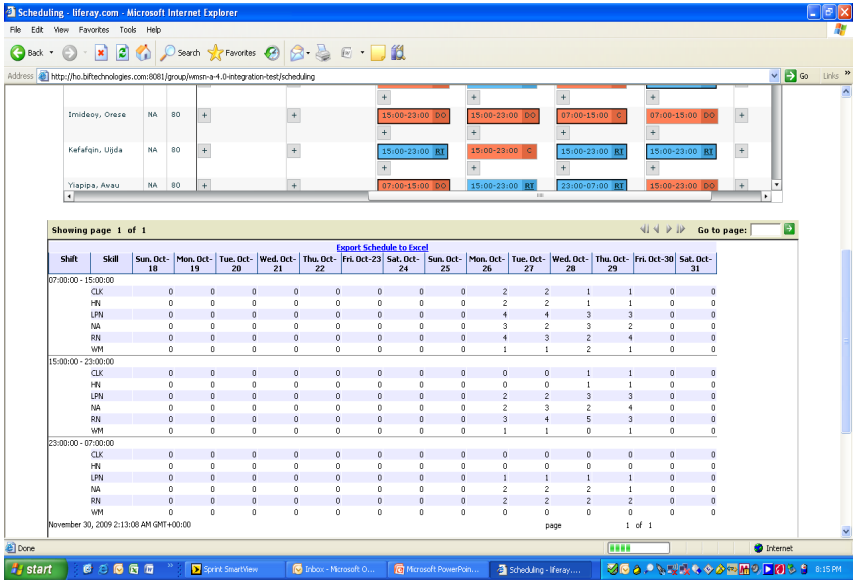


Other pending reports include:

- Un-assessed patient report
- Nursing supervisor dashboard which will give information about patient census/nursing care hours and staffing levels across the organization
- Real time access to data elements included on the Chief Nurse Progress Report for the organization and individual units

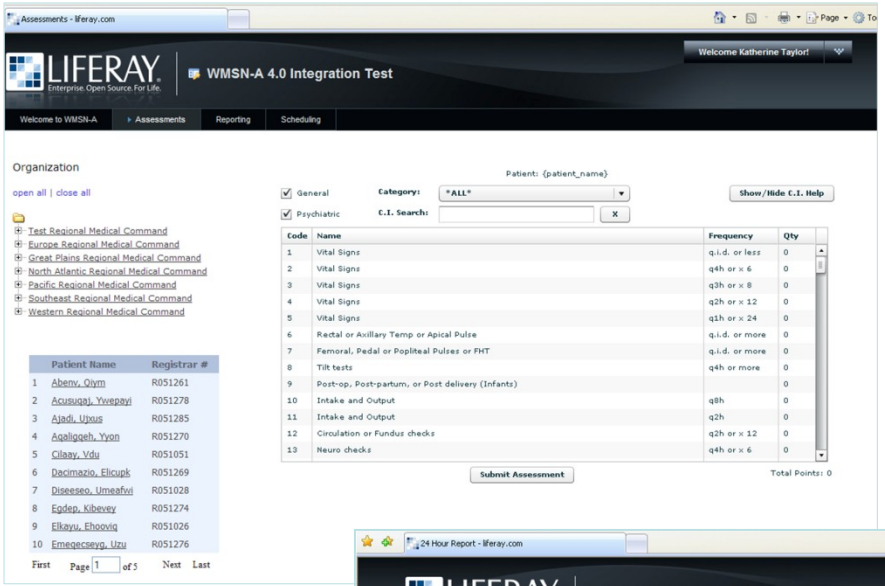
Scheduling





- Able to replace the use of excel spread sheet schedules (minimizing double documentation)
- Feeds the 24 hour report automatically to be viewed by leadership
- Uses non available codes to clearly document direct, indirect and administrative time
- Gives real time calculations of number of hours worked in a pay period and number of each skill working in a shift
- Keeps historical information in the data base for further analysis exception code hours

WMSN-A Prototype


Assessments - liferay.com
LIFERAY
Enterprise. Open Source. For Life.
WMSN-A 4.0 Integration Test
Welcome Katherine Taylor!
Welcome to WMSN-A
Assessments
Reporting
Scheduling
Organization
open all | close all
Test Regional Medical Command
Europe Regional Medical Command
Great Plains Regional Medical Command
North Atlantic Regional Medical Command
Pacific Regional Medical Command
Southeast Regional Medical Command
Western Regional Medical Command
Patient: {patient_name}
General
Psychiatric
Category:
ALL
C.I. Search:
Show/Hide C.I. Help
Code
Name
Frequency
Qty
1 Vital Signs q.i.d. or less 0
2 Vital Signs q4h or x 6 0
3 Vital Signs q3h or x 8 0
4 Vital Signs q2h or x 12 0
5 Vital Signs q1h or x 24 0
6 Rectal or Axillary Temp or Apical Pulse q.i.d. or more 0
7 Femoral, Pedal or Popliteal Pulses or FHT q.i.d. or more 0
8 Tilt tests q4h or more 0
9 Post-op, Post-partum, or Post delivery (Infants) 0
10 Intake and Output q8h 0
11 Intake and Output q2h 0
12 Circulation or Fundus checks q2h or x 12 0
13 Neuro checks q4h or x 6 0
Submit Assessment
Total Points: 0
Patient Name
Registrar #
1 Abeny, Qiym R051261
2 Acusuqaj, Ywepayi R051278
3 Ajadi, Ujxus R051285
4 Aqaliggeh, Yyon R051270
5 Cilaay, Vdu R051051
6 Dacimazio, Elicupk R051269
7 Diseeseo, Umeafwi R051028
8 Egdep, Kibevey R051274
9 Elkayu, Ehooviq R051026
10 Emeqecseyg, Uzu R051276
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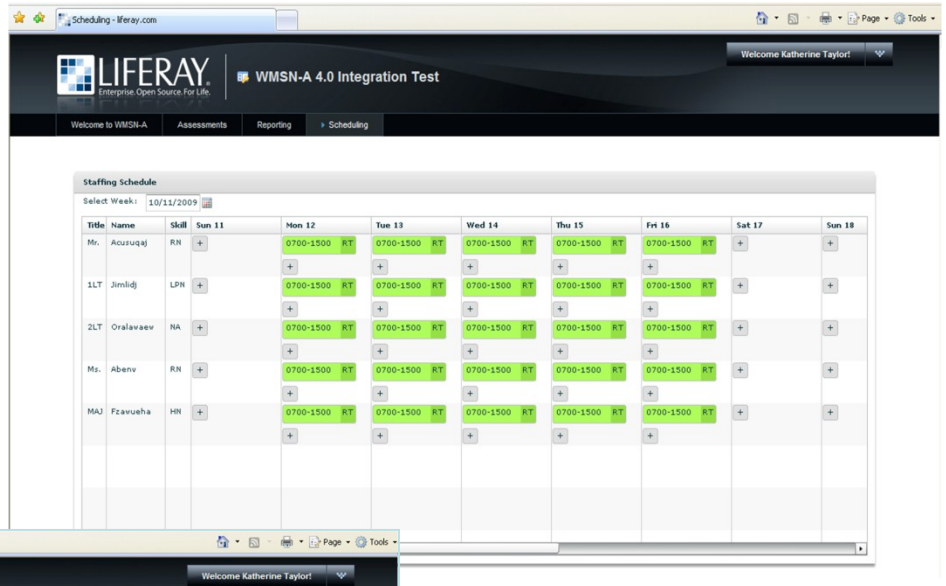

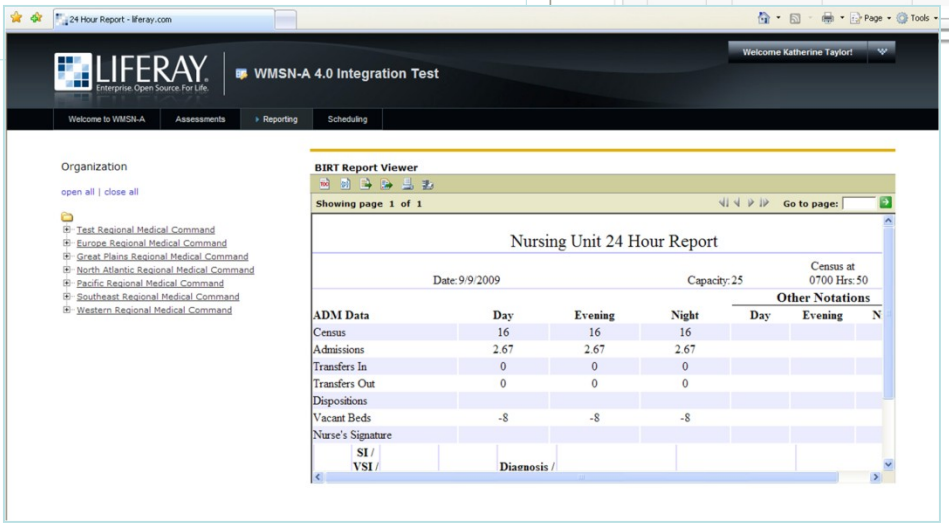

WMSN Program Office

- COL Kelly Wolgast– WMSN Program Manager
- LTC James Perrine – MEDCOM Nurse Methods Analyst
- LTC Katherine Taylor - WMSN Deputy Program Manager
- LTC Dawn Garcia – MEDCOM Functional Proponent

Questions